Item 8: Independent Market Monitor (IMM) Report

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VP Potomac Economics and
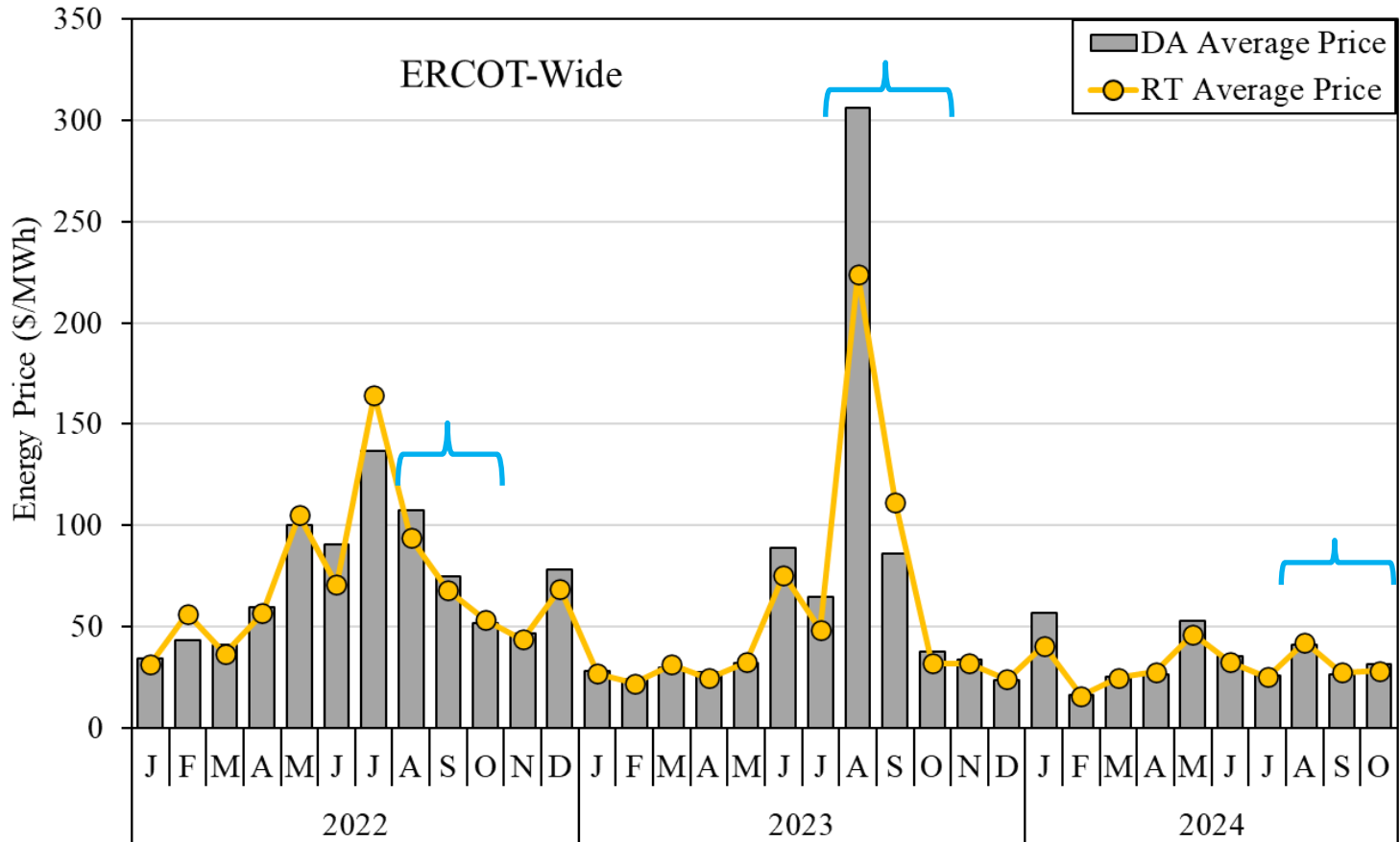ERCOT IMM Director

Board of Directors,
Reliability and Markets Committee

ERCOT Public
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# Wholesale energy price low for August - October

Energy price 55% lower in this period compared to 2023… driven by:

- Lower on average in the period, but 11% higher in October.

- Lower incidence of shortage pricing.

- Low natural gas price (20% overall, 25% in August)
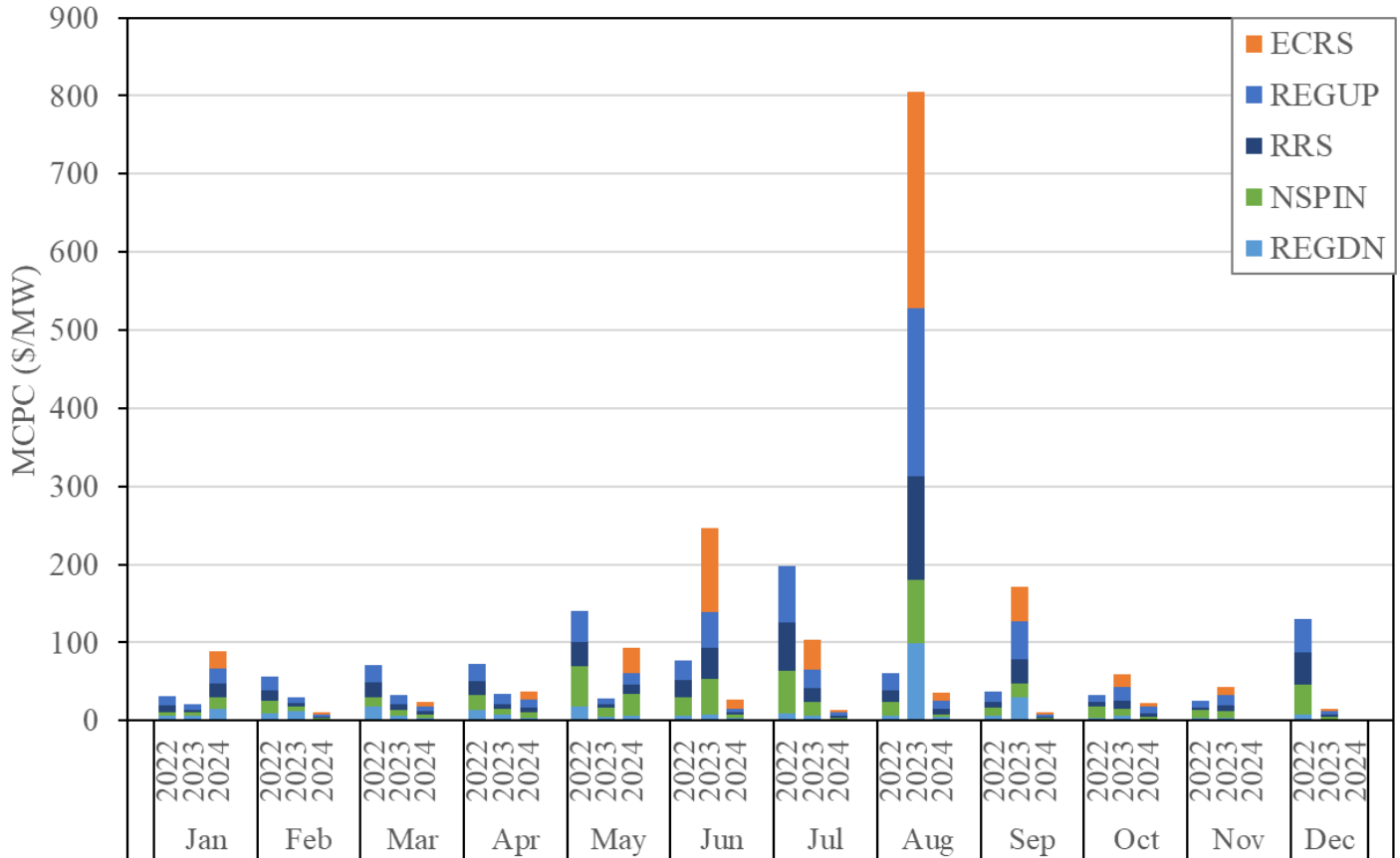
Load slightly lower in July and August

- Slightly lower load in August and September …
- Warmer October led to higher load.
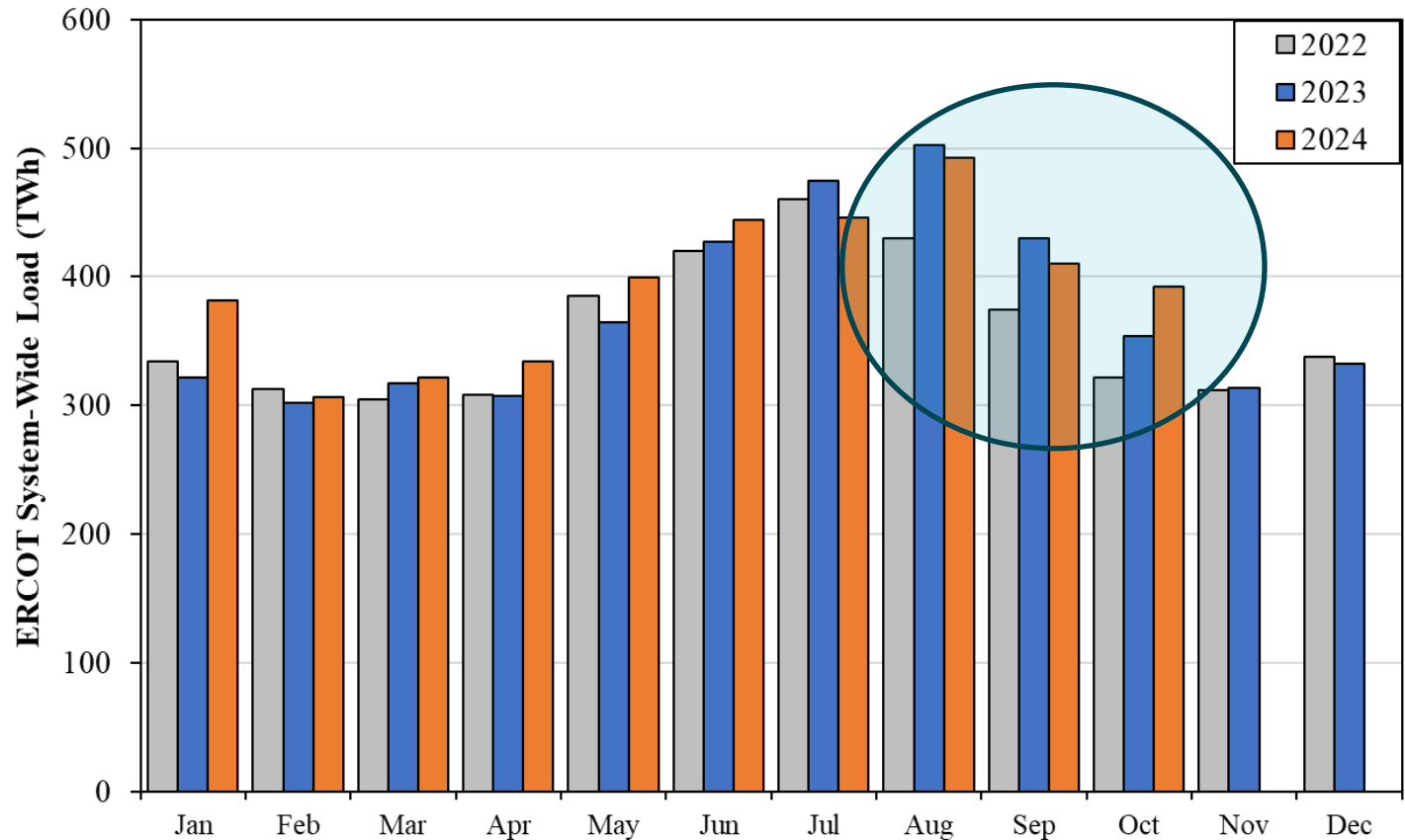
# Ancillary Service costs historically low

Lower cost driven by:

- Lower natural gas price
- Supply conditions less tight than 2022-2023

Resource mix to meet load largely proportionally unchanged in 2024

- Resource mix largely unchanged in August and September.

- Considerable increase in energy production from wind and solar in October.

- Battery storage are not reflected in this graphic as they are net load (see later slides).
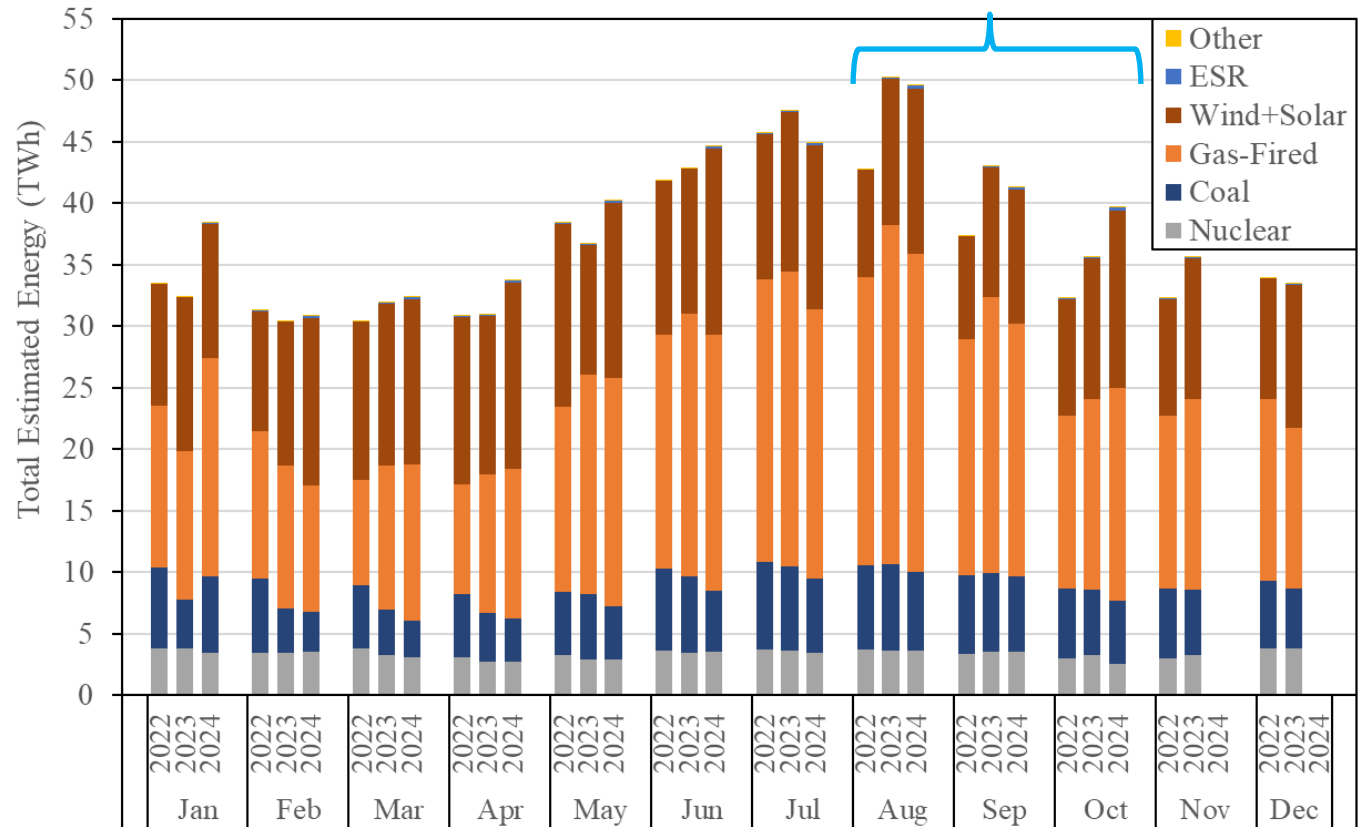
Congestion cost slightly lower in August - October, 2024

- Congestion cost is normal range for the period (aside from outlier August 2023).
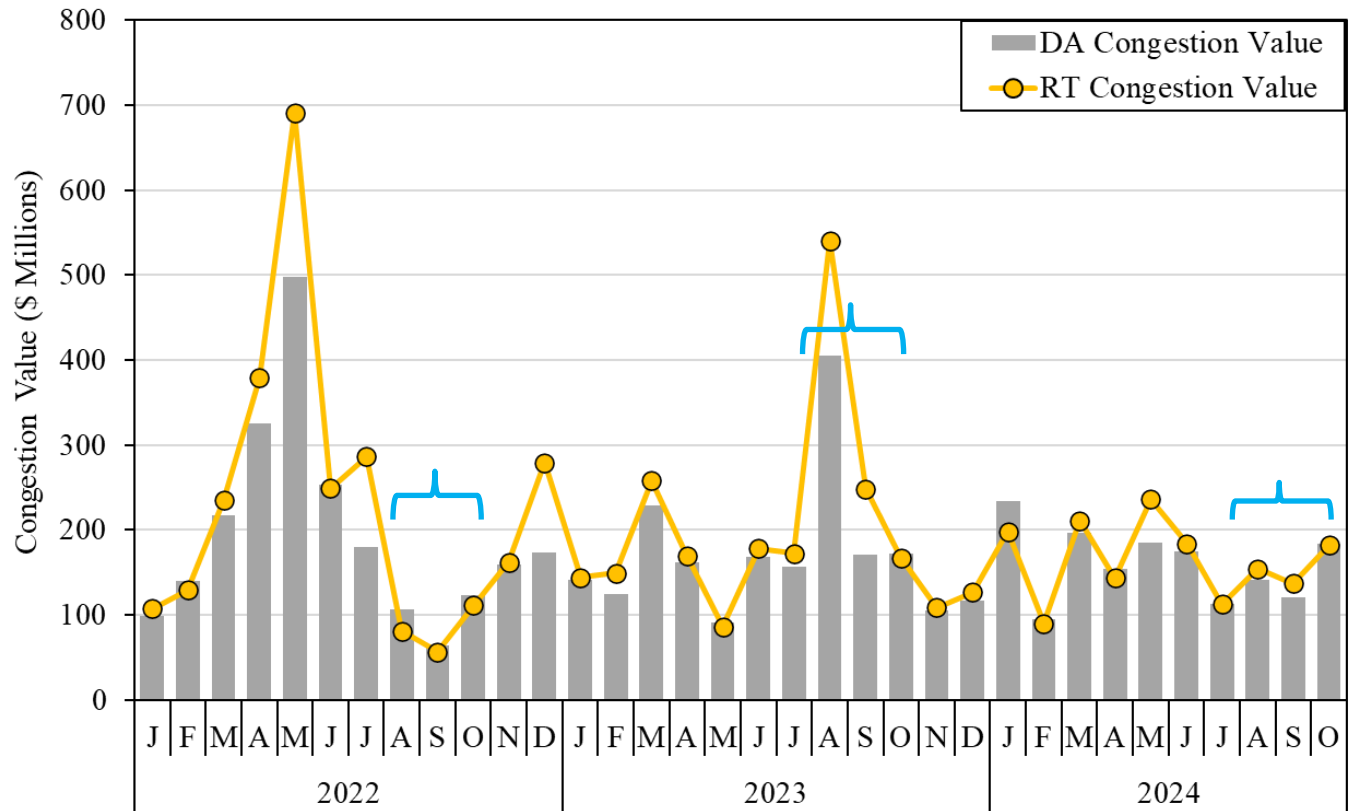
Energy Storage Resource supply offers

- Considerable increase in installed and offered ESR

- Considerable portion of ESR supply offered
  - In a "normal" energy price range, and
  - At the offer price cap.

Annual ESR Supply Offers by Price

Legend: <=$0, $0-$100, $100-$1,000, $1,000-$5,000, 5000

Y-axis: ESR MW (0 to 3,000)
X-axis: 2022, 2023, 2024
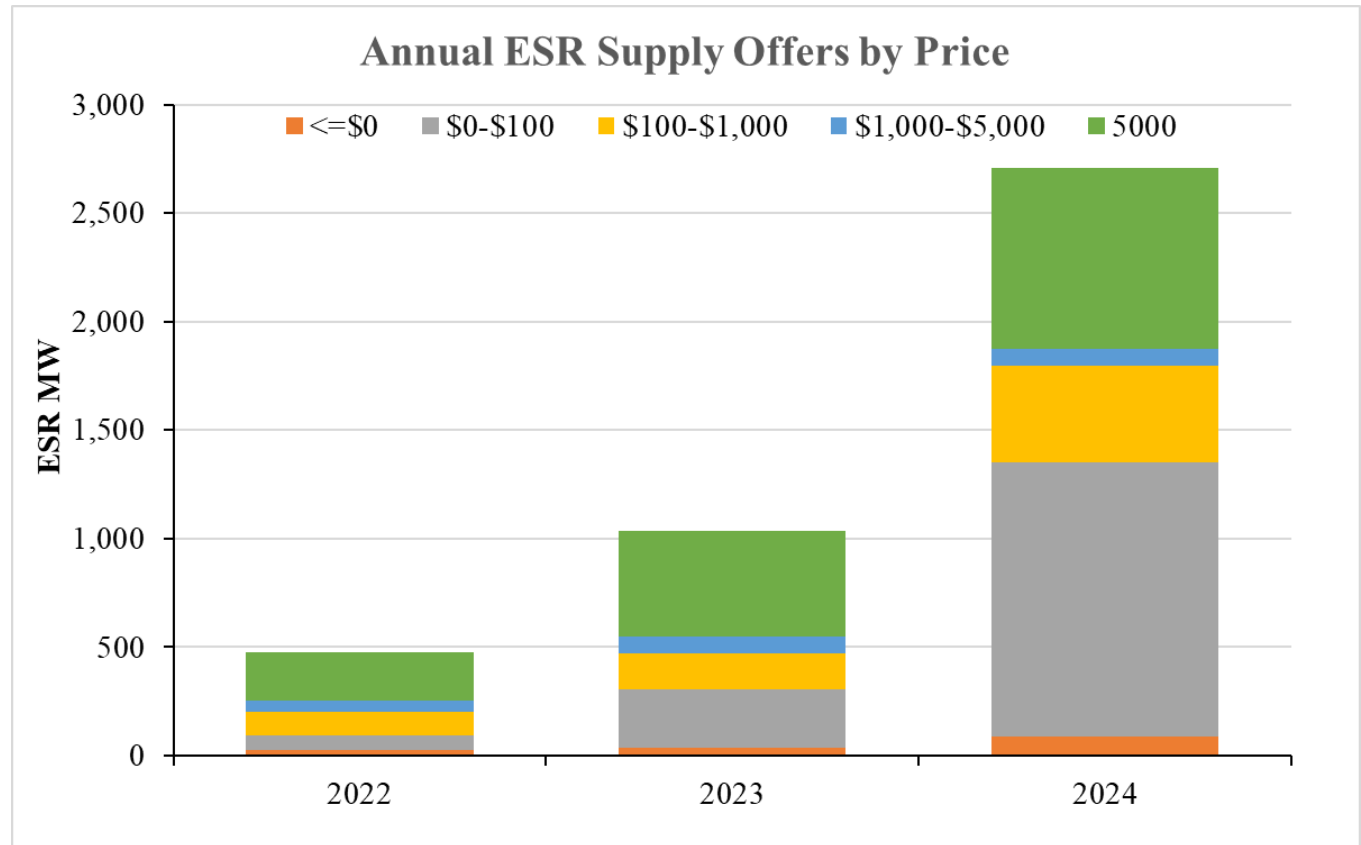
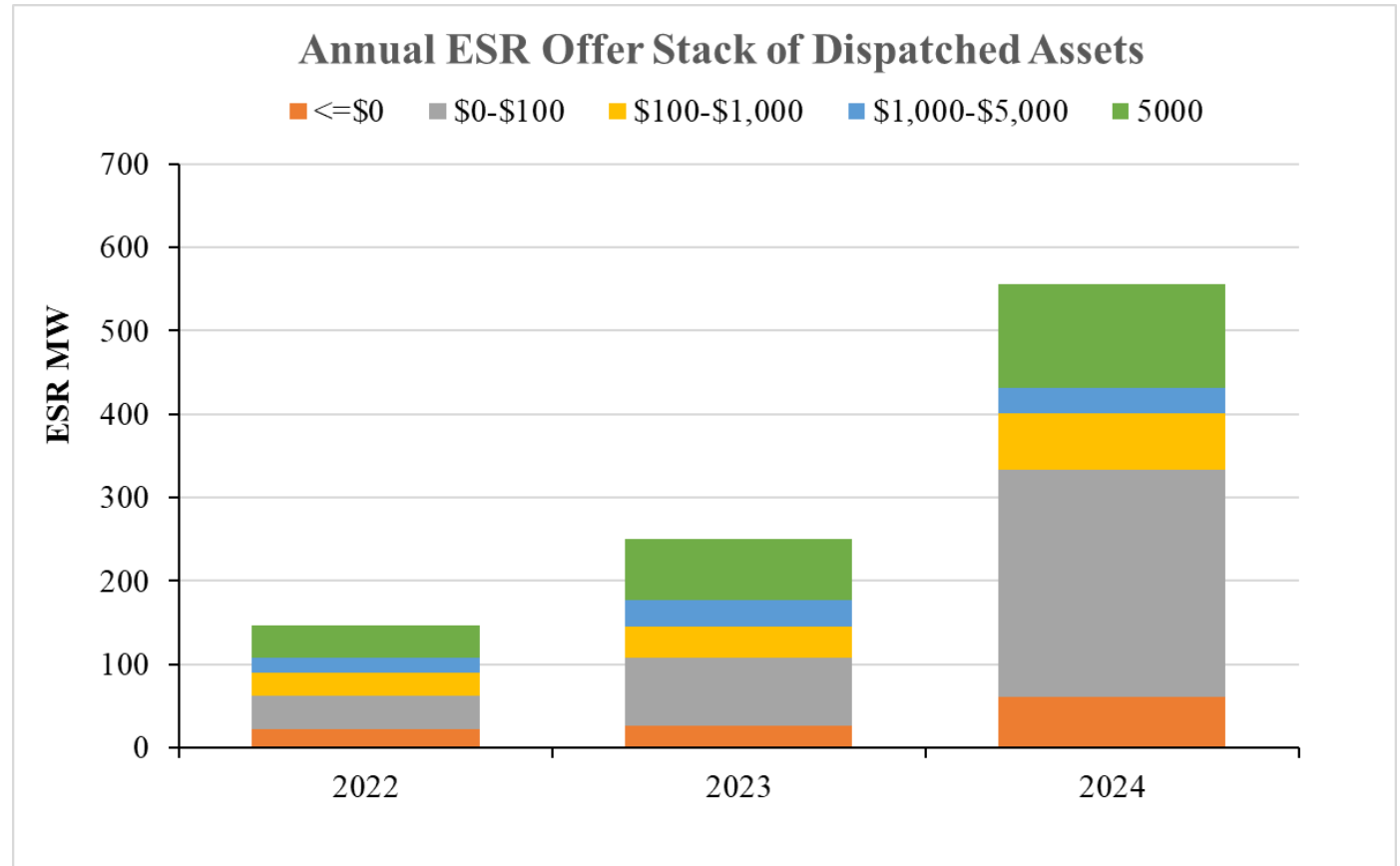# Offer price of Energy Supply Resources that are dispatched

- Bulk of ESR dispatch is in the normal market price range.

- Significant portion is offered at the offer price cap.

Annual ESR Offer Stack of Dispatched Assets

Legend: ■ <=$0 ■ $0-$100 ■ $100-$1,000 ■ $1,000-$5,000 ■ 5000

Y-axis: ESR MW (0 to 700)

X-axis categories: 2022, 2023, 2024

RTC – ASDC curve update

- IMM identified two concerns with existing ASDC design
  - The "shelf-cliff" attribute of higher quality services assigned a high shortage price for even the first MW of deficiency.
  - The construct and use of the individual curves inhibited the market's ability to make efficient tradeoffs among services to maintain reliability.
- These concerns are addressed by a nested reserve demand curve in the optimization used in other RTOs
  - The existing RTC design and software are not designed to accommodate a nested demand curve approach.
  - Pursuing a nested approach would delay of RTC implementation.

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RTC – ASDC curve update (2)

- IMM has developed a set of ASDC curves that
  - Addresses the two concerns,
  - Preserves the ORDC curve shape per PUCT direction, and
  - Can fit into the existing software design
- Alternate curves and simulation results have been provided to ERCOT, PUCT Staff, and discussed with stakeholders.
- Based on simulation results, we have observed that the proposed curves can
  - Produce pricing and dispatch outcomes comparable to the nested curves used in other RTOs
  - Be incorporated without delaying implementation or introducing performance issues with RTC

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RTC – ASDC curve update (3)

- IMM Recommends that ERCOT
  - Further evaluate the curves for compatibility with the existing software design and adjustments that may improve price formation,
  - Assess level of support for the resulting proposed change,
  - Work with IMM as needed to develop adjustments, and
  - Introduce the proposed change in the stakeholder process with sufficient time that stakeholder approval and implementation by RTC go-live may be achieved.
  - Reconsider the criteria that the aggregate ASDC exactly match the current ORDC

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